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EXAMINER				
AVELLINO, JOSEPH E				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/871,440

**Applicant(s)**

SRIVASTAVA ET AL.

**Examiner**

Joseph E. Avellino

**Art Unit**

2146

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/88)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Page No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-18 are presented for examination. Claims 1, 6, 8, 10, 15, and 17 stand independent.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fradette (USPN 6,606,698) in view of Graham et al. (USPN 6,594,700) (hereinafter Graham).

3. Referring to claim 1, Fradette discloses a method of responding to an incoming request message (i.e. I/O request message) from a sender (i.e. a client) which comprises, in combination, the steps of:

converting the message into a standard form (e.g. abstract);

comparing the inbound request message with previously received and stored inbound request messages (i.e. determine if the data in the cache corresponds to the requested operation, which could only be there if a previously accessed data not in cache which was then updated) (Figure 7B, refs. 222-228); and

if a match is found between the inbound request message and a given previously stored inbound request message, accessing a stored response (i.e. retrieve the requested object from the cache) previously transmitted in response to the previously

stored inbound message, and returning the stored response to the sender (Figure 7B, ref. 224).

Fradette does not disclose converting the incoming request message into an incoming canonical request message expressed in a predetermined standard form. Graham discloses converting the incoming request message into an incoming canonical request message (the Office takes the term "canonical" to mean "of or pertaining to a standardized form") 412 expressed in a predetermined standard form (Figure 7; col. 9, lines 10-41). Although Graham discloses using the canonical form of the request to determine service discovery, one of ordinary skill in the art would realize the benefits of using the canonical format for the cache lookup of Fradette when taken in view of the secondary reference. It would have been obvious to one of ordinary skill in the art to combine the teaching of Fradette with Graham since Fradette discloses conversion between protocols in order to treat the requests in the same manner or accessing the data storage, leading one of ordinary skill in the art to search for other methods of name/object correlation, eventually finding the novel method of Graham to convert a unique protocol into an XML canonical representation for efficient equivalence testing.

Claims 3-5, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fradette in view of Graham and further in view of Mattis et al. (USPN 6,292,880) (hereinafter Mattis).

4. Referring to claim 3, Fradette in view of Graham discloses the invention substantively as described in claim 1. Fradette-Graham do not specifically disclose generating an access key, based on said canonical request message, accessing the previously stored messages, and comparing the messages with the access key. In analogous art, Mattis discloses the step of comparing comprises the substeps of:

generating an access key value based on the content on the inbound canonical request message (Figure 9A, reference character 904; col. 27, line 50 to col. 28, line 3);

accessing zero or more selected ones of said previously received and stored canonical request messages which are specified by said access key value (Figure 9A, reference characters 906-916; col. 28, lines 3-29); and

comparing said incoming canonical request message with said selected ones of said previously received and stored canonical request messages (col. 28, lines 3-30).

It would have been obvious to one of ordinary skill in the art to combine the teaching of Mattis with Fradette and Graham in order to provide an efficient method of comparing elements in the cache such as the one of Fradette by generating an access key based on the request, thereby increasing efficiency of the cache mechanism, thereby resulting in increased throughput of the overall system.

5. Referring to claim 4, Fradette-Graham discloses the invention substantively as described in the claims above. Fradette-Graham does not specifically disclose storing the location denoted by the access key, rather just merely using the term "update cache" (Figure 7B). In analogous art, Mattis discloses wherein when no match is found

between said incoming canonical request message and a previously stored canonical request message, performing the step of storing said incoming canonical request message in a first storage location specified by said access key (Figure 10A and related portions of the disclosure). It would have been obvious to one of ordinary skill in the art to combine the teaching of Mattis with Fradette and Graham in order to provide an efficient method of comparing elements in the cache such as the one of Fradette by generating an access key based on the request, thereby increasing efficiency of the cache mechanism, thereby resulting in increased throughput of the overall system.

6. Referring to claim 5, Fradette-Graham-Mattis disclose the invention substantively as described in claim 4. Mattis furthermore discloses when no match is found, generating a new response message containing data specified by the incoming request message (i.e. retrieving object from server and storing in cache system) (Figure 9A, reference character 926);

transmitting said new response message to said sender (Figure 9A, reference character 926); and

storing said new response message at a second location associated with said first location (e.g. abstract).

It would have been obvious to one of ordinary skill in the art to combine the teaching of Mattis with Fradette and Graham in order to provide an efficient method of comparing elements in the cache such as the one of Fradette by generating an access

key based on the request, thereby increasing efficiency of the cache mechanism, thereby resulting in increased throughput of the overall system.

7. Claims 10 and 12-14 are rejected for similar reasons as stated above.

Claims 2, 6-9, 11, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fradette-Graham as applied above, and further in view of Schroeder et al. (US 2002/0099735).

8. Referring to claim 2, Fradette-Graham discloses the invention substantively as described in claim 1. Fradette-Graham does not disclose a portion of the incoming request message is expressed in XML language and is translated into a standard canonical XML form. Schroeder discloses an incoming data object in an XML language and is translated into a standard canonical XML form (p. 4, ¶ 48-49). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Fradette-Graham with Schroeder to easily allow disparate systems using different protocols the ability to share information easily without the need for mandated data formats which can be expensive and complicated to intertwine, thereby increasing customer satisfaction and interconnectedness as supported by Schroeder (p. 1, ¶ 4-5).

9. Claims 6-9, 11 and 15-18 are rejected for similar reasons as stated above.

***Response to Arguments***

10. Applicant's arguments dated March 16, 2008 have been fully considered but are not persuasive.

11. Applicant argues, in substance, that there is no motivation to combine Fradette with Graham. The Examiner disagrees. It has been recognized that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teaching of Fradette with Graham since Fradette discloses conversion between protocols in order to treat the requests in the same manner or accessing the data storage, leading one of ordinary skill in the art to search for other methods of name/object correlation, eventually finding the novel method of Graham to convert a unique protocol into an XML canonical representation for efficient equivalence testing. By this rationale, sufficient motivation has been provided for the combination of Fradette with Graham and therefore the rejection is maintained.

12. Applicant argues, in substance, that Schroeder deals with the normalization of XML data objects, not data requests. The Examiner disagrees. A "request" is merely a specialized data object which performs a particular function, namely requesting a particular data file. In order for an XML data request to be received, it must be sent within an XML data object. In this case, the conversion of Schroeder's data object can be applied to an XML data request. Furthermore, Applicant is reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is the combination of Fradette-Graham with Schroeder which meets the claim limitations. By this rationale, the rejection is maintained.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph E. Avellino/  
Primary Examiner, Art Unit 2146